

10 December 2009

Paying to keep the rainforests standing

A UN-backed scheme to reduce carbon emissions from the burning of forests could be one of the big winners of the Copenhagen climate summit, with the possibility of a big injection of funds. The BBC's Paulo Cabral has been to the Amazon to visit one of the most advanced pilot projects.

For Amazon villager Paulo Dos Santos, money does not grow on trees. It drips from them.

At times, he spends up to two weeks deep in the jungle looking for copaiba oil, a resin highly valued for its medicinal properties, extracted from the Amazonian tree with the same name.



Real life in the Amazon rainforest

"I look for the trees in the jungle and drill a hole in them so the copaiba oil can be extracted. Then I plug the hole with wood and I can come back weeks or even months later for more," Mr Dos Santos explains. He takes the oil to town to sell it but, he says, does not get much money for it.

"To survive from this kind of work we do need (financial) help, otherwise the only solution is to cut the trees and sell the wood."

Sustainable forest exploration - such as harvesting copaiba oil - is the kind of activity encouraged by the anti-deforestation scheme, known as Redd - Reducing Emissions from Deforestation and Forest Degradation in Developing Countries. But agricultural activities are closely monitored, and villagers promise not to cut down trees.

“ Vast quantities of carbon are stored in the trees and soils of tropical

forests - when the trees are burned down to clear land to grow crops, this is converted into carbon dioxide

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[Q&A: Redd](#)

In return for their "environmental services", the community also gets help to build infrastructure such as schools and electric power, and each family gets a monthly allowance.

Paulo dos Santos' wife, Josivalda, goes every month to the town of Novo Aripuana - a four-hour boat ride from their Boa Frente community - to get the family's benefit. It is not much money, but \$360 a year does make a difference in a region where the average yearly income is less than \$1000.

"It certainly helps. Before, people used to cut down trees around our village to sell to loggers but now we don't see much of that any more," Josivalda says.

Community policing

The Juma reserve in the Amazon, where Mr dos Santos lives with Josivalda and their six children, is one of the most advanced pilot projects of this kind in the world. It is all about changing the way forest economies work.



“ **If we want to stop destruction we have to show that a forest can be worth more standing than cut down** ”

Virgilio Viana
Sustainable Amazonas Foundation

"Deforestation does not happen because people are stupid or irrational, but because it brings money. If we want to stop destruction we have to show that a forest can be worth more standing than cut down," says Virgilio Viana, general director of the Sustainable Amazonas Foundation (FAS), a public-private partnership which runs the Juma reserve Redd project.

Deforestation in the Juma reserve has not stopped completely but satellite pictures from the Brazilian Institute for Space Research (INPE) show that it has significantly slowed down -

from some 150 hectares in 2006 when the reserve was set up to less than 80 hectares last year.

Anyone can monitor deforestation in the Amazon on the internet. The INPE website has up-to-date satellite pictures which are freely available to anyone who is interested. You can't quite see every tree, but you can make out the canopies.

But if state-of-the-art satellite monitoring allows authorities to spot deforestation almost in real time, getting there to do anything about it is a very different matter.

Brazilian authorities have only 19 teams on the ground to police a region larger than the 27 countries of EU put together.



Projects must help families in the rainforest, experts say

"Every week we inform to the police and environmental authorities of hundreds of spots of deforestation or jungle degradation. They do make an effort but they are clearly overwhelmed with all the information we send in," says the co-ordinator of the Amazon Program at INPE, Dalton Valeriano.

Amazonas state governor Eduardo Braga admits that more infrastructure on the ground is needed to police the Amazon more efficiently, but he is adamant that most of the surveillance has to be carried out by the people who live in the region.

"This can only work if we engage with the people in the Amazon. We cannot have police everywhere, but we do have communities everywhere," says Braga.

“ Right now Redd is the cheapest and most efficient way to reduce emissions in the short term ”

Joao Tezza
FAS director

In his state - 16 times the size of Britain or four times the size of Texas - 98% of the forest is still preserved, but projections show that if current rates of deforestation continue, almost a

third could be devastated by the middle of this century.

Braga says that the only way to prevent this is to make the effort to save not only trees but also people.

"You can't ask a mother to mind about saving a tree if her child is crying with hunger. If loggers come into her area willing to buy wood she certainly will cut the trees to feed her family."

'Living being'

However, all this is not cheap.



Harvesting copaiba oil as Paulo is doing is encouraged by Redd

The Juma reserve alone needs \$500,000 a year to run. To roll out the project for the whole Amazon, FAS director Joao Tezza calculates up to \$5bn will be needed. But he says the high figures should not be a deterrent to rolling it out.

"Deforestation represents about 17% of global greenhouse gas emissions. Of course Redd cannot replace other actions such as reducing industrial emissions but right now it is the cheapest and most efficient way to reduce emissions in the short term," says Mr Tezza.

Virgilio Viana of the Sustainable Amazonas Foundation is confident the cost can be met through the growing global carbon markets.

"We have made a proposition that out of the total \$118bn of the carbon market that we had in 2008, 10% to be allocated to Redd. If the new agreements to be signed in Copenhagen mean that we have more ambitious goals of emission reductions, this market is going to be much greater than we had in 2008."

In Juma, many people are starting to realise that it is important for them to protect their corner of the jungle.

Raimundo is one of the elders of the Boa Frente village and was a school teacher for many years. In the past, he used to travel the Amazon rivers trading on whatever could be extracted from the jungle, including wood.

But in the last few years, Raimundo had a change of mind. He does not cut trees, and does not like to see other people doing it.

"A tree is also a living being and I don't like to see it being killed. I think nature feels as I would feel if somebody came and killed one of my five children."